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09/716,198	11/18/2000	Carl P. Taussig	10990989-1	6159

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EXAMINER

PSITOS, ARISTOTELIS M

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2653

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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Paper No. 09292004

Application Number: 09/716,198
Filing Date: November 18, 2000
Appellant(s): TAUSSIG, CARL P.

Hugh P. Gortler
For Appellant

**SUPPLEMENTAL
EXAMINER'S ANSWER**

This is in response to the remand from the Board of Patent Appeals and Interferences of
06/30/2004.

(1) Real Party in Interest

A statement identifying the real party in interest is contained in the brief.

A statement identifying the related appeals and interferences, which will directly affect or be
directly affected by or have a bearing on the decision in the pending appeal is contained in the brief.

(3) Status of Claims

The statement of the status of the claims contained in the brief is correct.

(4) Status of Amendments After Final

The amendment after final rejection filed on 3/12/03 has been entered.

Art Unit: 2653

(5) Summary of Invention

The summary of invention contained in the brief is correct.

(6) Issues

The appellant's statement of the issues in the brief is substantially correct. The changes are as follows:

First issue:

Whether claims 1,4-8,10-11,13-18 are anticipated under 35 USC 102 (b) as anticipated by Miyamoto et al; and

Second issue:

Whether claims 2,12,19 and 20 are unpatentable under 35 USC 103 (a) over Miyamoto et al in view of Aoki.

Appellant's listed issues "a" and "b" and corresponding arguments directed thereto are directed to the first issue identified above.

Appellant's listed issue "c" and corresponding arguments directed thereto are directed to the second issue identified above.

(7) Grouping of Claims

Appellant's brief includes a statement that claims 1,2,4-8,10-20 do not stand or fall together and provides reasons as set forth in 37 CFR 1.192(c)(7) and (c)(8).

(8) Claims Appealed

The copy of the appealed claims contained in the Appendix to the brief is correct.

(9) Prior Art of Record

5,936,933	Miyamoto et al	8-1999
5,999,504	Aoki	12-1999
5,991,257	Kobayashi et al	11-1999

Art Unit: 2653

(10) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claims 1,4-8,10-11,13-18 are rejected under 35 U.S.C. 102 (b) as being anticipated by Miyamoto et al. The examiner interprets the pending claims to include Z-CAV formatted discs (Zonal Constant Angular Velocity), because (see below reprint of claim 1) as recited in claim 1, lines 3-5, the groove has a constant angular velocity (CAV) wobble, and the groove forms a plurality of concentric zones (Z).

The examiner further interprets this description as defining that of a zonal CAV. Zonal CAV is further defined as found in Kobayashi et al, see for instance col. 2, lines 1-9

"... a zone CAV disk is known as an intermediate disk existing between a CAV disk and a CLV disk. In this zone CAV disk, a data recording region of the disk is segmented into a plurality of zones. This zone CAV disk is rotate whose angular velocity becomes constant. In the respective zones, one zone located on the outer circumference side owns a larger sector number per 1 track (1 rotation), as compared with a sector number per 1 track of another zone located on the inner circumference side."

With respect to claim 1, the claim recites a disc with a constant angular velocity wobbled groove. This is considered present in the Miyamoto et al et al reference and as disclosed in the specification, in such formatted discs, the spindle is rotated at a constant angular velocity.

As discussed in Miyamoto et al, see for instance col. 2 lines 8-21, the disc is arranged into a plurality of groups. These groups are subsequently defined as zones – see for instance col. 4 lines 15-26.

Furthermore, looking at figure 5 of the Miyamoto et al document, the examiner interprets each group of 3 wobbled tracks as a zone, and as depicted therein, these groups are segmented into different zones in the radial direction (from inner diameter to outer diameter of the disc).

The following claim analysis is made:

Claim	Miyamoto et al
1) An optical storage medium comprising:	See the abstract, and col. 1 lines 18-22
a recordable medium; and	see abstract, and col. 1 lines 18-22;
a groove in the recordable medium,	see abstract, and col. 2 lines 8-11,
the groove having a constant angular	see col. 2 lines 19-21, col. 4 lines 49-55,

Art Unit: 2653

velocity wobble,

col. 5, lines 20-24;

wherein wobble cycles of the groove form

see col. 2, lines 53-56, col. 4 lines 15-26,

a plurality of **concentric zones** and

col. 5 lines 10-40, and col. 22 lines 24-50.

wherein wobbles cycles in the same zone are

spatially coherent.

Claim 4

As defined by the applicant

The medium of claim 1, wherein the wobble cycles in the same zone subtend the same angle; and wherein the wobble cycles in different zones subtend different angles.

the angular relationship exists in the appropriate Zone CAV format ; hence it Is inherently present in the Primary reference.

Claim 5

The medium of claim 4, wherein average spatial period of a wobble cycle in a zone is an integer multiple of channel bit length.

see col. 10, lines 35-45.

Claim 6.

The medium of claim 5, wherein maximum deviation of the wobble spatial period in each zone is the same fixed percentage

any deviation in each zone would be the same fixed percentage.

Claim 7.

The medium of claim 4, wherein wobble cycle period is stepped from zone-to-zone.

wobble cycle in a Zone-CAV meets this requirement.

Claim 8.

The medium of claim 1, wherein the groove has the same number of wobble cycles as a groove having CLV wobble.

as acknowledged by applicant, the aggregate zone of a disk with CAV wobbled groove has the same number of wobble cycles as a

zone of a disk having a constant linear velocity. Since the primary reference has the CAV limitation, it inherently has the limitation of claim 8.

Art Unit: 2653

Claim 10.

The medium of claim 1, wherein wobble cycles in the same zone are completely out-of-phase.

Claim 11.

An optical storage medium comprising:
a recordable medium; and
a groove in the recordable medium,
the groove having a plurality of wobble cycles that form a plurality of concentric zones, wobble cycles in the same zone subtending the same angle, wobble cycles in different zones subtending different angles.

inherently present in the Miyamoto et al reference.

Claim 13.

The medium of claim 11, wherein the average spatial period of the wobble cycles in the zones are Integer multiples of channel bit length.

Claim 14.

The medium of claim 11, wherein maximum deviation of wobble spatial period in each zone is the same fixed Percentage.

Claim 15.

The medium of claim 11, wherein wobble cycle period is stepped from zone-to-zone.

Claim 16.

The medium of claim 11, wherein the groove has the same number of wobble cycles as a groove having a CLV

Because the wobble cycles

in each zone are spatially coherent, this limitation is present as well.

see the abstract

see the abstract, col. 1, lines 18-22,

see abstract, and col. 2 lines 8-11,

see col. 2 lines 19-21, col. 4 lines 49-55,

col. 5, lines 20-24;

col. 5 lines 10-40, and col. 22 lines 24-50

As defined by applicant, the angular relationship exists in a Zone-CAV format, hence it is

See the above analysis of claim 5.

See the above analysis of claim 6.

See the above analysis of claim 7.

See the above analysis of claim 8.

Art Unit: 2653

wobble.

Claim 17.

Col. 5 lines 10-40 and col. 22 lines

The medium of claim 11, wherein the wobble cycles

24-50.

In the same zone are spatially coherent.

Claim 18.

See the above analysis of claim 10.

The medium of claim 11, wherein the wobble cycles

In the same zone are completely out-of-phase.

Claims 2,12,19 and 20 are rejected under 35 U.S.C. 103 (a) as being unpatentable over Miyamoto et al as applied to claims 1 and 10 above, and further in view of Aoki.

Although the Miyamoto et al reference discloses the ability of having address information modulated with the wobble, or to wobble the groove appropriately, the BPSK modulation format is not clearly depicted.

Aoki teaches the use of such a format in this environment for the improved s/n as found in col. 2 lines 29-46 why one would use the wobbling for the address signals.

It would have been obvious to modify the base system of Miyamoto et al with the teaching(s) from Aoki; motivation is to provide for the reason(s) acknowledged by Aoki.

Claim 2

Aoki

The medium of claim 1, wherein the wobble

see col. 1 line 45 to col. 3

of the groove is BPSK-modulated for providing address information.

line 11, see the abstract.

Claim 12.

The medium of claim 11, wherein the wobble of the groove is BPSK-modulated for providing address information.

See the above analysis of Claim 2.

Claim 19.

An optical disk comprising:

See the above analysis of

A recordable medium: and

claims 1 and 11 and claim 2

A groove in the recordable medium, the groove having a plurality

Of wobble cycles that form a plurality of concentric zones, wobble cycles

Art Unit: 2653

In the same zone subtending the same angle, wobble cycles in different zones

Subtending different angles, the wobble cycles being BPSK-modulated.

Claim 20.

See the above analysis of

The disk of claim 19, wherein the groove has the same

claim 8.

Number of wobble cycles as a CLV wobble groove.

(11) Response to Argument

Applicant's arguments with respect to the primary reference focuses that Miyamoto et al is not A CAV system, lack of any phase relationship between wobble cycles; and that with respect to claims 11, 13-18 there is no subtending of different angles and that the examiner concludes that the modification is obvious because the benefits of Aoki are obvious.

The examiner concludes that Miyamoto et al is a Z-CAV (zoned CAV format system). The examiner pointed to Kobayashi et al to further explain the term Zoned CAV.

The examiner kindly points to the above analysis of the claims and concludes that since the CAV system (as acknowledged by applicant) provides for the appropriate subtending of angles, then the Z-CAV system of Miyamoto et al inherently provides for such.

Applicant's arguments with respect to Aoki focuses on applicant's disclosure with respect to CLV wobbled groove and BPSK-modulated problems. Applicant further concludes that Aoki is a CLV system, and hence the problem would be a result of any such modification and relies upon MPEP § 2143.01 that such a combination fails to establish a prima facie case of obviousness with respect to claims 2,12,19 and 20.

The examiner does not believe that Aoki is so limited.

Aoki discloses at col. 1 lines 34-55 for the disclosed benefits of wobbling the address information and through to col. 2 line 17, and lines 29-46.

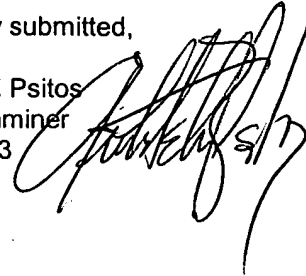
The examiner considers such as being the teaching and the motivation thereof.

For the above reasons, it is believed that the rejections should be sustained.

Art Unit: 2653

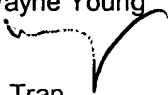
Respectfully submitted,

Aristotelis M Psitos
Primary Examiner
Art Unit 2653



AMP
November 8, 2004

Conferees
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